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 In the claims:

1.   (Currently Amended) A method for maintaining cache coherence in a multiprocessor

system having a plurality of nodes, each node having at least one cache, a memory device local to

the node, and at least one processor device, the method comprising:

       storing information regarding the state of data exclusively in an interconnect

communicatively connecting said nodes with one another, such that the interconnect is a sole

repository of cache coherence information within the multiprocessor system;

       checking said stored information to determine the location of the most current copy of a

requested portion of data, in response to a request by a requesting node for the requested portion

of data;

       retrieving said current copy of requested portion of data and directing said data to the

requesting node; checking said stored information to determine the location of the requested

data; and

       directing the system to send said requested data to the requesting node without going

through said interconnect.

2.   (Currently Amended) A multiprocessor computer system comprising:

       a plurality of nodes, each node including at least one processor and portion of a shared

distributed system memory coupled to said processor; and

       an interconnect both communicatively connecting said nodes with one another and

exclusively storing location and state information of data stored in the memory of the nodes such

that the interconnect is a sole repository of cache coherence information within the multiprocessor

computer system.

3.   (Original) The multiprocessor system of claim 2, wherein each node includes memory

accessible to it without communications through said interconnect, and memory accessible

remotely by others of the nodes.

4.   (Original) The multiprocessor system of claim 2 wherein further said interconnect stores

information for determining which nodes or processors are storing copies of one or more

identified data in each said node's memory.

5.   (Original) The multiprocessor system of claim 2 wherein said interconnect compares

requested data with the stored location and the state of data in the nodes, directs requested data

to the requesting node, and sends requests for additional data to other nodes for which said device

stores the location of data.

6.   (Original) The multiprocessor system of claim 5 wherein said interconnect includes a

dispatch buffer operatively connected to the nodes, and issues requests for information related to

the state of identified data to other nodes simultaneously with the communication of data to a

target node.

7.   (Original) The multiprocessor system of claim 5 wherein said interconnect includes a first

pathway storing the location and state of data in the nodes, and a second pathway communicating

the data requested by said target node.

8.   (Currently Amended) A method for maintaining cache coherence in a multiprocessor

system having a plurality of nodes, each node having at least one cache, a memory device local to

the node and at least one processor

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device, the memory and processor device being coupled to form a complete subsystem, the

method comprising:

      storing information regarding the state of data <u>exclusively</u> in a first part of an interconnect

communicatively connecting said nodes with one another, <u>such that the interconnect is a sole</u>

<u>repository of cache coherence information within the multiprocessor system</u>;

      said first part checking said stored information to determine the location of the most

current copy of a requested portion of data, in response to a request by a requesting node for

data;

      said first part directing a second part of the interconnect to forward the said most current

copy of said data to the requesting node; and

      said second part retrieving said current copy of requested portion of data and

directing said data to a target node.

9.   (Original) The method of claim 8 wherein said first part checking said stored information

to determine the location of the most current copy of a requested portion of data, in response to a

request by a requesting node for data, comprises:

      storing information about the state of data in each node in said first communications

pathway;

      checking the state of requested data stored in each node upon request for the data from a

node by reading the said stored information and determining the desired state defined as the most

current copy of said stored data.